

## ABSTRACT OF THE DISCLOSURE

A failure diagnostic apparatus for a gas concentration detecting apparatus is provided, which can early detect disconnection in a cell included in the gas concentration detecting apparatus. The gas concentration detecting apparatus is provided, which includes cells each of which pumps out oxygen in a gas detection chamber, thereby generating an electric current corresponding to the concentration of oxygen in the gas detection chamber. A heater which heats each of the cells to an activation temperature is provided. A period during which a predetermined electric current should flow in the cell after the heater starts heating is detected. A determination on whether there is disconnection is made based on whether each of electric currents flowing in the cells is appropriate.